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The Bristol Medico-Chirurgical Journal

" Scire est nescire, nisi id me
Scire alius scierit."

AUTUMN, 1925.

THE DIAGNOSIS OF SCARLET FEVER.[1]

BY

JOHN WALLACE, O.B.E., M.B., C.M. Ed.,

Medical Officer of Health and Medical Superintendent, Isolation Hospital, Weston-super-Mare.

IN the beginning of last century Heberden the elder wrote of scarlet fever: "This distemper is sometimes so slight as to require no remedies, and sometimes so violent as to admit of no relief." As it was then so it is to-day, but fortunately the general run of cases is of the less serious type and the mortality is comparatively low.

The history of the disease, however, shows that its severity has lessened and again become aggravated in cycles of varying length, and it may be that we are only passing through a period of milder attacks which is only temporary. Our cases in Weston-super-Mare are too few to base any generalisations on them, but after some eight or ten years

[1] A Paper read at the meeting of the Bath and Bristol Branch of the British Medical Association at Weston-super-Mare, May, 1925.

of a mild type of the disease we have had during the past year several cases of a toxic type and a much greater tendency to "complications" occurring in others; this may be the beginning of a new cycle.

That scarlet fever may be still of great severity when it attacks virgin soil is seen in a report by Monillac in connection with an outbreak lasting from March, 1921, to May, 1922, in Yunnan in South China, where the disease had not existed in living memory. About 50,000 persons, or nearly one quarter of the population, appear to have died; eighteen Europeans were attacked, and all recovered.

It is obvious that a disease of this character is of serious importance from the point of view of public health. It has long been recognised as a dangerous infectious fever, and in this country is "notifiable," and in many sanitary districts the local authorities provide hospital accommodation for cases of scarlet fever and other diseases with which they may be confused. Correct diagnosis of the disease is therefore of special importance if cross-infection is to be avoided.

Squire defines scarlet fever as "an infectious specific fever, with sudden ingress, soreness and redness of the throat, and a finely-diffused scarlet rash on the second day, most intense on the third day, beginning to fade on the fifth or sixth with some subsidence of the fever, and followed by desquamation of the cuticle, in both small and large flakes; and inducing a liability to rheumatic and renal symptoms and a tendency to serious effusions." That is a sufficiently comprehensive description of what one has to look for and would probably find in a typical case of average severity, and the diagnosis would be plain sailing.

In ordinary measles (with which till about the middle of the sixteenth century scarlet fever was confused) typical cases seem to be the rule and the diagnosis easy, but scarlet fever "is so varied in its manifestations and liable on occasion

to assume such mild forms that the diagnosis is often extremely difficult." Even in the severe form in the Yunnan epidemic it took on a marked anginose type, and was at first mistaken for and treated as diphtheria. The rash also was frequently absent.

Our chief difficulty in Weston is with the very mild types of scarlet fever, where the local signs are slight and constitutional symptoms practically absent. I am frequently asked to see such cases in consultation, and often the household conditions make a decision on the case one of very considerable responsibility, which the practitioner in attendance is very wise to share with someone else. In particular one has only to mention a suspicious case arising in one of our many boarding schools to get you to visualise how many different interests may be affected by the diagnosis, while if a definite diagnosis is not possible the worries and inconveniences of quarantine are far from negligible.

How often one has wished for some infallible simple test. There was the *Rumpel-Leede* sign—a bandage round the upper arm stopping the venous return but not the arterial pulse was said to produce after a few minutes petechial hemorrhages in the fold of the elbow in a true case of scarlet fever. Well, it did not always come off when it was most wanted, and it also occurred in other exanthemata, so I gave it up.

So also with the *Diazo reaction* in the urine and "Dohle's" inclusion bodies in polymorph leukocytes.

I have not tried the "Schultz-Charlton" or extinction sign, but even if it were definite I think you will agree that a Wassermann reaction and a test of the serum for sterility would be essential before injecting a patient, and would prevent any wide use of the test.

Naturally we have all been looking to the bacteriologist to help us as he has done in diphtheria, enterica, etc., by

discovering an easily recognisable and readily procurable germ as the guilty agent of the disease. Klein, Mervyn Gordon and others have worked at the streptococci found in the throats and secretions of scarlet fever patients for many years, and in particular have isolated the *S. hæmolytica*, but have failed to prove its specific relation to the chief manifestations of scarlet fever. Recently, however, the Dicks of Chicago appear to have had more success. Dr. Copeman, of the Ministry of Health, paid an official visit to New York to investigate some of their work, which he described on April 23rd last at a meeting of the Royal Society of Medicine. He has been so impressed with the work that the Ministry has appointed a Medical Officers' Committee on scarlet fever, and that Committee recommends further study of the questions raised by the Dicks' conclusions. But I gather that there is real difficulty in differentiating the offending member of the hæmolytic streptococci, and that the streptococcus has not always been found in the throat of scarlet fever cases.

A few years ago I took a child into hospital for scarlet fever, and found she had faucial diphtheria as well. She probably had been an old-standing carrier, for she continued to have positive swabs long after she had ceased desquamating and had quite recovered from the attack of scarlet fever. At the end of nine weeks the ward she occupied alone was required for other patients, so she was carefully examined and found to be free from any apparent sequelæ. She had the usual discharge bath and, wearing clothing previously stoved, was placed in the only available ward with a little boy recovering from diphtheria. On the third day the boy developed typical scarlet fever. Dr. Savage kindly saw the girl with me and took swabs from the nose and throat on the possibility of finding streptococci present, but the result of the bacteriological examination was negative.

How, then, is one to come to a decision in the abnormally mild cases so long as the bacteriologist is baffled in his efforts to help us ?

Heubner of Berlin lays great stress on the rash—its peculiar characteristic finely, delicately punctuate appearance, rose-red at first but gradually darkening and coalescing till it assumes a flaming, fire-red look justifying the name of scarlet fever. The punctiform character may not be universal, but it can generally be seen on some area of the body. But he admits the rash may be absent, and then the diagnosis may become very difficult.

Dr. Duke, on the other hand, advised one not to look at the rash at all until all the symptoms and other signs have been studied along with the history of the case. The sight of the rash is apt to prejudice you, and should only be used as a confirmation of the diagnosis you have arrived at. I agree with this method rather than Heubner's, and if constantly followed it must be a great aid in diagnosing the cases where no rash is to be found at the time of the examination and give confidence to one in his work.

One high authority on the diagnosis of small-pox teaches that when a patient comes under observation you should " avoid letting him or anyone speak to you about the history of the case until you have completed your own examination " (Wanklyn). " To be groping about for a history is to lean upon rotten supports which you are better without." At the same time, he would not shut his ears to a story which makes a *prima facie* case, but would use it as a cause for investigation. I doubt if one should go as far as Wanklyn does as to excluding the history at first in cases of suspected scarlet fever ; still, there is much to be said for Sir George Murray Humphry's advice in examining cases in general : " Eyes first, hands next, tongue last and least."

The aspect of the patient is of importance in ordinary

cases, for he generally looks, as he is, fairly ill in the early stages ; in the milder cases he may not show any appearance of illness. Then examine the condition of the mouth and pharynx. The *white strawberry* tongue of the second day, the *red strawberry* or *raspberry* tongue of the fourth day, or the *raw beef* tongue which follows are almost invariable phenomena, and the last may persist for a week or more.

In early cases one can generally observe some affection of the throat. Even if you haven't the usual sharply-defined, deep redness there may be slight congestion and some swelling of the tonsils with even a thin veiling deposit on them. The lymph glands at the angle of the lower jaw are generally enlarged and tender on pressure, in many cases painful. The cervical glands may also be enlarged.

Temperature and pulse are noted, and this peculiarity is found in scarlet fever that the rapidity of the pulse in proportion to the height of the temperature and age of the patient is greater than in other diseases :—

e.g. 103° F. with 150 to 170 pulse per minute,
102° F. with 130 to 170 pulse per minute,
100° F. with 124 to 170 pulse per minute,

even in mild cases in children of five or six years. The trouble of late years has been that temperatures have often been almost normal, but even in these cases an increased pulse-rate is generally found. Albuminuria should be tested for.

If the strawberry tongue and the peculiar pulse-temperature ratio are observed the physician will probably have reached a provisional decision which will be strengthened if one or more of the other signs mentioned are present, and still further supported if he can now get a history of more or less sudden vomiting, and feverishness with headache and general malaise. Often one can get an account of known

exposure to possible infection within the maximum incubation period of five days.

Now one can look for a rash; if present and of the character already described there can be no possible doubt of the diagnosis, but its absence need hardly worry one. On the other hand, if it departs from the normal it will require careful study, and if it cannot be brought into line the original diagnosis will have to be revised.

If the result of the first part of one's examination does not tally with the symptoms of scarlet fever then it will seldom be found that the rash is the one which one expects to find in that disease.

If there are no helpful signs but only a suspicious history then the best one can do is to play for safety and treat the case as one of the more dangerous nature and establish temporary quarantine at any rate. A few days may clear things up, or more likely they won't, and one waits hopefully for desquamation—often a broken reed, but all one has to lean on.

If in the course of three weeks or so desquamation is present on the hands and feet, occurs between the fingers and toes and shows a pin-hole type, we can at least feel that the patient's friends may be satisfied, even if we are not, for so many conditions are followed by peeling!

I have said nothing about double infections or two intercurrent diseases, but diphtheria is not seldom found along with scarlet fever, and it is wise to take a swab of the throat before treatment is begun in case Löffler's bacillus be present. Unfortunately, there will always be a number of undecided cases until the *causa causans* is discovered and can be readily diagnosed in the laboratory.

THE COMPARATIVE EFFICIENCY OF LOCAL ANÆSTHETICS. [1]

BY

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INTRODUCTION.

THE synthetic chemist is frequently urged to produce new local anæsthetics better than any we now possess. When he turns to the clinician to learn what properties are to be sought in an ideal drug of this nature he finds, in addition to questions of cost and those side actions which may influence use in certain situations, some such list as the following ([2, 7, 11]) :—

1. High anæsthetic efficiency.
2. Low toxicity.
3. Absence of irritation.
4. Stability and ready sterilisability.
5. No tendency to "idiosyncrasy."
6. No tendency to "addiction."

As is perhaps natural from those who are bringing out such a drug as a commercial proposition, the defects of the well-known drugs, and especially cocaine, in these categories are apt to receive undue emphasis.

[1] Received for publication August, 1925.

STABILITY.

Thus, with regard to (4), cocaine hydrochloride is not appreciably less stable than its synthetic rivals. All can be sterilised by boiling, if this is done properly; all are decomposed by prolonged boiling or by alkalies, and afford a ready pabulum to moulds if carelessly stored. It is an open question whether great stability is a desirable property—it might well lead to increased difficulty on the part of the patient in the disposal of the drug after use.

"IDIOSYNCRASY."

It is often assumed that patients exhibit "idiosyncrasy" to cocaine only. This is not so; novocaine, alypine and stovaine have all given rise to this trouble at times. That is to say, some degree of disturbance has been caused by a dose small and usually free from this risk. If by "idiosyncrasy" we imply that doses ordinarily safe may in certain individuals cause death, we are discussing a phenomenon that on the face of it is so rare as to be a pathological curiosity. Examination of the evidence demonstrates how very inadequate it is ([8, 9, 13]). But it is to be remarked that the readiness with which cocaine gives signs of overdose—with a dose far short of the fatal dose—so far from being a disadvantage is one of the best possible safeguards. Indeed, this is probably the only reason why fatal accidents have in forty years of universal use been of extraordinary rarity. Elsewhere I have brought evidence on this point, and the close connection between this property and "addiction" ([16]). The social disadvantages ([4, 5]) of the latter phenomenon must be trivial in comparison with the boon of clinical security.

CRITERIA OF EFFICIENCY.

We have thus remaining the first three postulates only to consider. The position may be re-stated thus :—

(*a*) The ideal local anæsthetic should induce complete loss of function in the sensory nerve endings, fibres or cells with which it comes in contact, and that in a concentration at which it does no appreciable damage to other tissues.

In order to fulfil this demand a drug must have some special "selective" action on sensory nerve tissue (4). It is true that the action of some of these drugs is not the same for all types of nervous tissue ; they affect, as a rule, sensory fibres more readily than motor (3). But this is a matter of degree only ; the effect of such drugs on other nerves is not materially less than that on sensory nerves, when compared with their effect on other tissues. We can, therefore, hardly expect that a drug that will readily paralyse sensory fibres will not also paralyse the nervous tissue of the medulla, if present in sufficient concentration (10, 15). The second criterion of efficiency may therefore be stated :—

(*b*) The ideal local anæsthetic should be non-poisonous ; in the sense that the dose necessary for (*a*) is very far short of the dose that, gaining entrance to the circulation, will paralyse the medulla.

The efficiency of any drug as a local anæsthetic is for practical purposes determined by the way in which it fulfils these two criteria. It is, therefore, interesting to consider what are the means we adopt to discriminate between different drugs as to their efficiency.

ANÆSTHETIC EFFICIENCY.

A variety of means has been adopted to compare the anæsthetic powers of various drugs. It has long been recognised that animal experiments are of little real value on this point, often misleading and difficult of clinical application (7). But the value of various methods of investigation in humans is by no means identical. The simplest method of test is to apply under the same conditions, for the same arbitrarily-fixed time, solutions of the same arbitrarily-fixed strength, and to assign values in accordance with the production or otherwise of good anæsthesia. Since there is no certainty that the conditions selected are suitable for the action of all the drugs, it is not to be wondered at that very various results are obtained. A similar method is based not on the production or otherwise of anæsthesia, but on its duration (12); the latter depends on a number of factors, among them the total quantity of drug present in a given area at any time. It leads to the conclusion, for example, that one volume of 2 per cent. solution of cocaine does *not* contain approximately twice as many "anæsthetic units" as the same volume of 1 per cent. solution (2), a *reductio ad absurdum.*

METHOD OF COMPARISON.

The method that I have found most satisfactory in comparing different drugs of this class is as follows. We determine *in what concentration* the same volume of each solution will produce complete anæsthesia *in the same time.* It is then fair to assume that each solution contains the same number of "anæsthetic units" per c.c. Working on these lines, one obtains results as follows :—

TABLE A.

Drug (Surface application). (*a*)	Concentration, per cent.	Time required to induce anæsthesia, seconds. (*b*)	Concentration of cocaine inducing anæsthesia in same time, per cent.	Comparative anæsthetic value Cocaine = 1.
Cocaine HCl [18] ..	2	483	—	—
	3	268	—	—
	5	125	—	—
	10	45	—	—
Novocaine	20	411	2·2	0·11
Alypine	5	325	2·6	0·52
	10	133	4·8	0·48
Stovaine	10	171	4·0	0·40
Benzamine	10	240	3·2	0·32
Methyl-benzamine (*c*)	5	425	2·2	0·44
Psicaine [14]	5	212	3·5	0·70
	7	119	5·1	0·73
Tutocaine [17] ..	5	208	3·5	0·70
	10	78	6·8	0·68
Apothesine	10	288	2·9	0·29
Butyn	2	272	3·0	1·50 [12]
	5	78	6·8	1·36
Novocaine subcutaneous (*d*) ..	0·5	—	0·1+	0·25

(*a*) For technique, see [18].

(*b*) Small errors in estimating time produce no appreciable effect on the result.

(*c*) The methyl homologue of benzamine, prepared by the Department of Chemistry, Bristol University.

(*d*) Inserted for comparison.

COMPARATIVE TOXICITY.

When investigating the effect on the medulla of these drugs it is, of course, not possible to conduct human experiments. We must rely on animal experiments, and

assume that the ratio of toxicities found in this way is the same as the ratio of toxicities to man. The value of our experiments is influenced by the species chosen ([6, 11, 16]) and by the fidelity with which we reproduce the conditions which obtain in the clinic. For example, if we employ hypodermic injections, the drug should be in the very low concentration in which it is used clinically—concentration very considerably influences our results ([15]). A series of some 300 experiments has given the results shown in Table B :—

TABLE B.

Drug.	Experimental lethal toxicity in guinea-pig by subcutaneous injection. kgm. per gm. [15]			Comparative toxicity. Cocaine = 1.
	½ per cent.	1 per cent.	5 per cent. (*a*)	
Cocaine HCl	16	20	25	—
Novocaine	? 2·5	—	2·5	0·16
	—	—	3	0·12
Alypine	11·5	—	—	0·7
Stovaine	—	7	—	0·35
Benzamine	—	9	—	0·45
Methyl-benzamine ..	—	—	14	0·56
Psicaine	17	—	—	1 + (b)
Tutocaine	6	—	—	0·4
Apothesine	—	7 –	—	0·33
Butyn	16	—	—	1 (b)

The protocols of these experiments are deposited in the libraries of Bristol and Cambridge Universities and of the Royal Society of Medicine.

(*a*) In this high concentration the relative toxicity appears rather low.

(*b*) The relative toxicity of psicaine and of butyn ([15]) is higher at ¼% concentration.

EFFICIENCY RATIO.

We are now in a position to see which drugs best fulfil the conditions laid down as desirable. For this purpose

we divide the value obtained for anæsthetic efficiency for each drug by that obtained for toxicity.

TABLE C.

Drug.	Comparative anæsthetic value. Cocaine = 1. (Table A.)	Comparative toxicity. Cocaine = 1. (Table B.)	Cocaine efficiency ratio.
Cocaine HCl	1	1	1
Novocaine	0·11	0·12	0·9
(injected dilute)	0·25	0·16	1·5
Alypine	0·5	0·7	0·7
Stovaine	0·4	0·35	1·1
Benzamine	0·32	0·45	0·7
Methyl-benzamine	0·44	0·56	0·8
Psicaine	0·7	1 +	0·7
Tutocaine	0·7	0·4	1·7
Apothesine	0·29	0·33	0·9
Butyn	1·4	1	1·4

From Table C it appears that the efficiency ratio of all these substances is somewhere about unity. When it is remembered that the two factors concerned have been estimated on very different species, it appears probable that the variations are within the limits of experimental accuracy. If so, we are forced to the conclusion that *the anæsthetic power of all these substances is roughly proportional to their toxicity* (15). In other words, the power of each of paralysing sensory nerve fibres is proportional to its power of paralysing the nervous tissue of the medulla. Therefore, as regards their comparative efficiency, there is little to chose between them. Certain of them may have special advantages for particular types of work; some of them may have disadvantages as being irritant. But safety in use is governed by the considerations set forth in the beginning, and not by any marked difference in the

power of an effective anæsthetic dose of any one of them to kill. Until some radical departure from the type of compound at present in use is attained it appears vain to expect an anæsthetic which is materially better (considering both efficiency and safety) than cocaine.

SUMMARY.

1. All "local anæsthetics" are efficient if sufficient time is allowed for them to act, and the concentration employed reaches the necessary minimum.

2. All "local anæsthetics" are safe, in the sense that, used with care and intelligence, the risk of death should be negligible.

3. No "local anæsthetic" is safe in the sense that ignorant or careless use involves no serious risk of disaster.

4. Those drugs which give rise to disturbance in a dosage far short of a fatal dose, though possibly less convenient than others, are likely to be the safest in ordinary practice.

5. There appears no theoretical reason why those who have learnt to use cocaine, either by injection or by surface application, should not continue to do so. None of its rivals appear to have *any material advantage* over it from *any point of view*. We cannot at present hope that any compound with a similar mode of action will ever possess such advantage.

ACKNOWLEDGMENT.

The expenses of this research have been met by a grant from the Colston Research Fund of Bristol University, for which my thanks are due. I am also indebted for permission to work in the Pathological Department of Bristol University to Professor Walker Hall; and for supplies of synthetic drugs to Professor F. Francis; the Abbott Laboratories, Chicago; Messrs. Merck, Darmstadt; Messrs. Bayer, Ludwigshafen; and Laboratoire L. Schaerer, Paris.

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Reviews of Books.

The Nature of Disease. By J. E. R. McDonagh, F.R.C.S. Pp. 327. Illustrated. London: William Heinemann Ltd. 1924. Price £3 3s.—It is suggested on the wrapper that Mr. McDonagh's new book, with this comprehensive title, "should appeal, not only to every medical man, but also to those laymen who are interested in the advancement of science." But the reader who, confident (perhaps erroneously) that he has understood the author's earlier writings, plunges into the last, finds himself swept along from the start on a strong stream of new ideas, beset by many heterodox currents, and constantly buffeted by the waves of a strange and difficult nomenclature. Of the two classes of reader possibly the layman will find less difficulty than the physician. For the speculations as to the nature of biological processes are certainly fascinating, and they are presented in the convincing and seductive style that has always characterised Mr. McDonagh's pen. Yet these speculations—for many are surely no more—are frequently stated as though they were axioms of pathology, or at least well known and accepted theories.

The author has been brought, by the study especially of syphilis, to the conclusion that all disease is one: "Disease

results from the protein particles in the plasma going into solution." Both morbid processes and therapeutic effects are explained in a theory of electric and physico-chemical variations in the constituents of the body. The foundations of this theory are, briefly, the staining properties of cells and changes in the properties, such as viscosity and refractive index, of the body fluids. The first part of the book deals with a view of the life cycle of the organism of syphilis; then the rôle played by different cells in infection and in malignancy is described; not until Chapters VII. and VIII. do we get an explanation of the terms used. Then follows a very full account of experiments on rabbits, with descriptions of the effects of injecting a variety of agents. The latter chapters deal with Intoxication in man, Chemotherapy, Coagulation of blood, the Wassermann test, Shock, and the Cerebrospinal Fluid, all of which are discussed from the viewpoint of the New Gospel. The Finale is, "No disease has a specific pathology." The whole is emphasised in a series of very fine coloured and monochrome plates.

A few excerpts may afford some indication of the troubles awaiting the potential proselyte. "Inflammation is a process of dehydration or lysis, and malignant disease is a process of excessive hydration" (page 3). "Every infection in the beginning causes the particles (of colloid protein in the plasma) to lose some of their negative electricity. In consequence, some of the particles . . . may pass into the molecular dispersoid state" (page 4). "An electron is a particle of negative electricity; its size is 1/1845 of that of the hydrogen atom; it contracts as it moves, and has internal energy which determines both its inertia and its susceptibility to gravitational influence" (page 72). Electrons are also "B-rays of radio-activity" (page 73). All matter is composed of electrons; but the origin of positive electricity is left obscure. Yet "the red corpuscle is positively charged, and cannot be the seat of malignant disease." In other instances one has to fall back on the hope that a misprint is the *fons et origo mali*.

Mr. McDonagh considers that no real "cure" of any infection ever occurs, and that all re-infections are in truth only exacerbations. Yet when one has decided that all disease is one, the temptation to the obvious corollary of a panacea is irresistible. "Manganese butyrate has cut short an attack of nasal catarrh, influenza, pneumonia, otitis media, canine distemper, etc. If the initial injection is prescribed (? and administered) within seventy-two hours of the onset of an acute infection . . . in the majority of cases the invader will be overcome." But be careful; for if any other drug has been administered the manganese may act as an ion!

The Snark, in fact, proves a Boojum. Still, "in cases where manganese butyrate fails mesothorium bromide may succeed." From the Panacea, the next logical step is the Elixir of Life. "Senescence is the result of the protein particles undergoing dehydration. . . . Ageratin (=preventer of old age) prevents a lytic condenser from producing lysis . . . conductors from producing dispersion and hydrators from causing the stable form of condensation." Messrs. Heinemann are to be congratulated on the manner in which the book is produced. The paper is good, the print clear, and the plates really beautiful. There is an adequate index.

Surgical Operations: a Text-Book for Nurses. By PROFESSOR E. W. HEY GROVES, M.S., F.R.C.S. Second Edition. Pp. 255. London: Oxford Medical Publications. 1925. Price 21s.—A second edition of *Surgical Operations* shows that this novel work is welcome in the nurse's library. Its scope is wide, the descriptions of operations are simple and concise, and the illustrations clear and numerous. The information it provides should greatly increase the interest of her work, and render the nurse a far more valuable and competent assistant both to doctor and patient. The opening chapter on general surgical technique is a good foundation for theatre work, while throughout this manual, in addition to clear outlines of the operations, there are valuable notes on special points in preparation and post-operative care of cases. The formidable subject of surgical instruments is reduced to a convenient compass by grouping them as an appendix, in which they are arranged in an unusual manner—alphabetically. A few errors, such as the inversion of the print of a tonsil guillotine, and the absence of familiar friends like aural specula and mouth gags, are noticeable. The subject is set forth in so broad, clear and attractive a form that *Surgical Operations* holds an unrivalled position in the literary equipment of all nurses and students.

Gynæcology with Obstetrics. By JOHN S. FAIRBURN, M.A., B.M., B.Ch. Pp. xxii., 769. London: Oxford University Press. 1924. Price 25s.—In this excellent text-book for students the author has departed from the stereotyped arrangement of most text-books, and dealt with Gynæcology as part of Obstetrics and not as a separate subject. This arrangement makes Gynæcology more interesting and shows its intimate relation to Obstetrics. The physiological basis of the various disorders of pregnancy is fully explained and the conflicting theories dealt with fairly and not dogmatically. As a text-book for students, from the point of view of passing examinations, there are insufficient headings and heavier print which bring out the salient points and impress them on the students' mind.

Excellent features are the inclusion of the public health, medico-legal and sociological bearings of this subject, which are lacking in other text-books, and yet are so important in practice. The book is well written and precise and the illustrations are very good, especially so of the mechanism of labour and anatomical specimens; altogether it can be thoroughly recommended both for students and practitioners.

Psycho-Analysis Analysed. By P. McBride, M.D., F.R.C.P., F.R.S.E. With an Introduction by Sir H. Bryan Donkin. Pp. vii., 142. London: William Heinemann. 1924. Price 3s. 6d. net.—This book describes psycho-analysis, dreams, the physical basis of mind, and the attitude of medical men towards physical analysis. In order to place before the reader the views of such exponents of the subject as Freud, Jung, W. H. R. Rivers, and Adler, the author quotes verbatim, giving, for instance, their own interpretation of dreams. This book is a criticism of the ideas underlying psycho-analysis and the author, rejecting the hypothesis of an unconscious mind, reaches the following conclusions: that the whole claim rests on a series of hypotheses which are so improbable as to vitiate their use as legitimate premisses; that it is unjustifiable to deduce from them a method of treatment, and that there is no evidence of success if such treatment is applied; that no proofs have been advanced to show that dreams have any value whatsoever; and further, that the attempted interpretation of dreams rests on no logical basis, and that the methods adopted may result in anything or nothing according to the taste of the interpreter. There appears to be a great deal of force in what the author writes, and in his opinions and conclusions, though perhaps the weakest part of the book is that which deals with the possibility of an unconscious mind. Here his arguments are less convincing than when he is examining critically the other aspects of the subject.

Reports of the St. Andrew's Institute for Clinical Research, St. Andrew's, Fife. Volume II. Pp. 190. Humphrey Milford: Oxford University Press. 1924. Price 10s. 6d. net.—The appearance of this volume a few weeks before the death of Sir James Mackenzie recalls to our minds the keenness of his interest in the St. Andrew's Institute, of which he was the Honorary Director. Whether the test of time will spare these papers that have been issued under his direction, or other of the works of the Institute, only time itself can tell. What is certain is that they should serve to remind us of Mackenzie's unquenchable belief in the possibilities of general practice as a field for research. They include papers by Sir James Mackenzie himself; a very interesting little study of fibrillary

tremor by Dr. A. Walker; a careful account of cardiac pain, based on a series of cases minutely observed, by Dr. J. Orr; a series of papers on reflexes and one on "fluctuation" by Professor P. T. Herring; a very interesting note by Professor Waterston on skin sensibility; one on the normal infant's chest as studied skiagraphically, by Drs. J. H. P. Paton and A. Rowand; a study of influenza as seen in a girls' school, by Dr. J. H. P. Paton; and observations on lymphatics and lymph glands, by Professor Herring and Dr. F. G. MacNaughton. The term "fluctuation" is applied to a phenomenon which is described as a variation in the number of cells employed in the performance of the function of the organ to which they belong; sometimes fewer cells are at work, sometimes more. If this principle is shown by other workers to be true of all sorts of organic function, it should find important application in the field of clinical medicine.

The Modern Nursing of Consumption. By DR. JANE H. WALKER. Pp. viii., 75. London: The Scientific Press Ltd. 1924.—In many ways this is a very excellent book and for its small size most comprehensive. In the opening chapters a rough sketch of the pathology of the disease is given and a short résumé of the symptoms with which it is most important that nurses in charge of consumptives should be familiar. The statement regarding death from loss of lung tissue is open to question, except in the case of spontaneous pneumo-thorax. Dr. Walker's division of the disease into three types is essentially a clinical classification, and is the point of view from which a nurse should regard her cases. Those chapters dealing with institutional treatment show an intimate knowledge of Sanatoria, but there are very few middle class homes where this treatment is likely to be carried out with any degree of conscientiousness. The patient's point of view, as mentioned in Chapter vi. should go far towards preventing thoughtlessness on the nurse's part, as this is one of the worst faults in a nurse. Chapter vii. is rather a digression from the rest of the book, and is a short account of some of the simpler forms of treatment. This is a book which those who are in charge of nurses would do well to read.

Middle Age and Old Age. (Oxford Medical Publications.) By LEONARD WILLIAMS, M.D. Pp. ix., 296. Humphrey Milford: Oxford University Press. 1925. Price 10s. 6d.—This is a lively and very suggestive book, in which our interest is never allowed to flag whether we agree with the writer or no. It discusses both how we can best survive to old age and the latest theories on those maladies which prevent our reaching it. There is a brilliant account of some thirty of the ailments and troubles of later life, such as angina, bronchitis, glycosuria, the sequelæ

of the menopause, and prostatic troubles, with many suggestions as to prevention and treatment. Thus the frequent fallacies of albuminuria, and the endocrine causes of obesity as well as over-eating are pointed out. The reader will be interested too in the clear summaries given of many recent theories, Spahlinger's views, Gauvain on sunlight, Frank Coke on asthma, Arbuthnot Lane's teaching and Voronoff's operations, besides a long discussion of the work and interaction of the system of endocrine glands. The latter is emphasised because the author thinks that in old age we have the endocrines failing all round in their struggle against toxins. Throughout the book there is a vigorous polemic against present-day habits and fashions of diet, which he holds responsible for most of the troubles which cloud and shorten old age. He tells us that the ordinary man at fifty is in a state of chronic toxæmia due to gross over-eating, the use of cooked foods and the absence of vitamins. "Natural" foods, uncooked and unconcentrated, should become our aim. The physiological doctrines of calories, heat-forming and body-building foods are baseless or useless. Our true guide should be the old theory of so many reformers, "Let us go back to the state of Nature." Rice pudding is a vile concentrate of carbohydrates and milk, deprived of vitamins, often containing irritating indigestible disaccharid sugar, which leads to many diseases. Butcher's meat comes from animals made toxic by overfeeding, inertia, and castration, which has removed an endocrine barrier against bacterial invasion. Still, we should like to know exactly what these toxins are and how they are absorbed after cooking and digestion, for we know that scientists have thrown doubt even on the absorption of toxins from putrid meat. Then, too, we are told that we all, especially the aged, sleep too much and dress too warmly. Though "unfortunately warmth is agreeable to the aged," this may be a vice which they should resist. Now it is well known that certain tribes, even in cold climates, go without any clothes at all, but are they any healthier or longer lived? The question is not to be settled by eloquent discussions, but by painstaking research. Though we may not attain to the enthusiastic faith of the writer, we must be grateful for the many valuable suggestions and observations recorded in this work.

Medical Education: A Comparative Study. By ABRAHAM FLEXNER. New York: The Macmillan Co. Pp. ix., 334. 1925. Price 10s. 6d. net.—Those who read Dr. Abraham Flexner's report on the Carnegie Foundation in Medical Education, published not long before the war, will be interested to find in this new volume a reiteration, in compact and convenient form, of the information collected by the author from

the Medical Schools of Europe and America. He takes internal medicine as a basis for the study of methods of teaching, and follows the student through his curriculum from the stage of general education to that of graduation. His interest is, however, not solely or even chiefly with the kind of education that aims at turning out a good average man, but rather with that which teaches every student to think for himself, and, by his own observations and investigations, to add to the sum of knowledge. He addresses himself mainly to the cure of the shortcomings of the American Medical Schools; but, as in his previous work, there is a good deal that he does not like in the British methods. He admits that headway has been made in the past fifteen years, and we think we detect a greater respect for the British method than was apparent in his earlier report; but, measuring progress in terms of dollars, he says that "British expenditure, even with these (Government) subventions, lags far behind that of the smaller Continental countries and of America to-day, as it does behind the German and Austrian pre-war period." The book is not an easy one to read straight through, but it is a wholesome exercise, and one that should be undertaken by everyone who realises the danger of insularity in the study, teaching and practice of medicine.

Manson's Tropical Diseases. By PHILIP H. MANSON-BAHR, D.S.O., M.A., M.D., D.T.M. and H. Cantab., F.R.C.P. Lond. Eighth edition revised. Pp. xx., 895. London: Cassell & Co. 1925. Price 31s. 6d.—It is always pleasant to meet an old friend, even when much changed from the days of our earliest acquaintainship, and on this occasion the pleasure was enhanced when we found the traits and character so liked and admired of yore were still present. We are very glad that although "drastically revised and, indeed, remodelled," it still contains much of the teaching and some of the actual writing of the great man, the original author. When we recall the earliest edition of this book in 1898, we are at once impressed by the increase of knowledge in this branch of medicine, and the alteration of ideas with respect to Etiology, Cause, Pathology and Treatment of many Tropical Diseases. And this progress in Tropical Medicine has not ceased, for although it is only four years since the seventh edition appeared, it has been found necessary to bring out this new one, in order that the book may be up to date. Since the last edition was published, knowledge with regard to certain then obscure diseases has been greatly increased, and they are now classified in this book under the groups to which they belong. For instance, we now find under the heading of Leptospirosis: Yellow Fever, Infectious Jaundice, and Seven Day Fever, three diseases which have many clinical and pathological features in common.

This grouping, we are told, has been rendered possible by the discovery during the last three years of certain delicate Spirochætes to which the name of Leptospira has been given. These organisms have been proved to be active pathogenic agents, and to produce definite pathological changes in the organs which they inhabit; their life history outside the body differs considerably in the three diseases. The discovery by Noguchi in 1918 of the Leptospira icteroides, and his proof that it is the virus of yellow fever, conveyed by the mosquito *Aedes argenteus*, has confirmed the classical great work of the Americans on yellow fever, and has elucidated some further points in connection with this disease. The section on Medical Zoology has been entirely re-written and many new illustrations added. There have been some changes in nomenclature; for instance, our old friend *Stegomyia fasciata*, who had his name changed to *Stegomyia calopus*, is now called *Aedes argentus*; these alterations of zoological titles, however necessary for scientific reasons, are always a worry to the general practitioner in the Tropics and elsewhere. The article on Alastrim refers to an aspect of Small-pox, "which has come into prominence in Tropical Medicine during the last few years." It is a useful addition and should prove very helpful. Under Leprosy the method for classification of varieties of the disease employed by Rogers and Muir is not mentioned, the old method of classification is adhered to. The intensive treatment of this disease with sodium morrhuate and the gynocardate, as recommended by Muir, is given. However, the author strikes a note of warning at the commencement of the paragraph on treatment. He says, "One is very apt to be deceived in estimating the value of a drug in Leprosy." The leper has, especially if placed under good hygienic conditions and well cared for, naturally periods of amelioration without any treatment by drugs. The sufferer generally comes for treatment at a period when his symptoms are exacerbated; if he is put on some drug treatment, and then the usual or natural amelioration takes place, the particular drug employed is apt to get the credit of the improvement. In the treatment of Malaria we were glad to note how clearly the author deals with the use of intramuscular injections of quinine, and that whilst pointing out their great value, we may say almost necessary employment in certain cases, he duly impresses that this method of treatment is not without dangers, unless carefully and skilfully carried out. Had the facts stated and the warnings here given been known and fully realised by all during the late war many accidents might have been prevented. We should like to see more stress laid on the value of the method of the administration of quinine by rectal injections; it was found very effective in East Africa during the late war.

It requires very little apparatus, and can be carried out where from want of necessary appliances and facilities the intravenous or intramuscular methods are not possible or advisable. We would suggest that in a future revision of the book some remarks on the after-effects of Malaria and Dysentery, with any known facts as to their influence (especially the former) on diseases of the chest (tuberculosis), ears and eyes, would be a helpful addition. The insertion of six skeleton maps designed to show at a glance the geographical distribution of various diseases, Yellow Fever, Trypanosomiasis, etc., is a new feature and should prove useful. There are many new illustrations, ninety-four, including four full-page plates. The book, notwithstanding all the additions, has not been allowed to grow unwieldly, for this edition is shorter than the last by some seventy pages. In conclusion, we consider the book continues to fulfil the desire of the author of the first edition, and supplies "a manual on the diseases of warm climates, of handy size, and yet giving adequate information."

Health and Environment. By LEONARD HILL, M.B., F.R.S., and ARGYLL CAMPBELL, M.D., D.Sc. Pp. xi., 208. London: Edward Arnold. 1925. Price 12s. 6d. net.—These who are familiar with Nos. 32, 52 and 73 of the Medical Research Council's Special Report Series will agree that those publications are too technical to appeal in any wide sense either to the busy medical man or the educated layman. In *Health and Environment* Professor Leonard Hill and Dr. Argyll Campbell, his co-worker at the National Institute of Medical Research, have embodied in a simplified form the main results from these three Reports. It has been long recognised that discomfort caused by atmospheric conditions does not depend merely upon temperature or upon the small fluctuations which commonly occur in the amount of oxygen, carbon dioxide, or organic impurities present. The cooling and evaporative powers of the air are the most important factors in this connection, and these depend largely upon air-movement and humidity. The Kata Thermometer is a simple instrument designed by Professor Hill for measuring these cooling and evaporative powers. It consists essentially of an alcohol thermometer which has two marks representing 100° and 95° F. The alcohol is heated above the former temperature, and the time required for it to fall from 100° to 95° F. is noted, thereby affording a measurement of the cooling and, in the case of the wet bulb Kata Thermometer of the evaporative power, of the surrounding air. Ventilation is, however, only one of the many topics dealt with in this book, which is designed to bring before the profession and the public the main conditions

opposing our national health and efficiency. The chapters on Clothes, Colds, Light—natural and artificial—and Food represent the modern conceptions on these subjects, conceptions which deserve wider application than they receive at present; while the range of knowledge at the disposal of the authors is shown in interesting chapters on the Skin and Metabolism. The reduction of three volumes into one is not an easy task, and we consider the authors are to be congratulated on the results. The book is one which can be read in an arm-chair of an evening with pleasure, and certainly with profit.

Lectures on Dyspepsia. By ROBERT HUTCHISON, M.D., F.R.C.P. London: Edward Arnold & Co. 1925. Price 5s.—These lectures were published to help the practitioner in a common but difficult department of medicine, and they most satisfactorily fulfil their purpose. Dr. Hutchison emphasises throughout the importance of diagnosing between organic and functional diseases of the stomach, and reiterates over and over again the cardinal points of distinction between the two. He particularly calls attention to a fact which is often forgotten, namely that functional dyspepsia is a disorder of the nervous system. We doubt, however, whether the practitioner will agree with his statement that the majority of dyspepsias are due to organic disease. The author is particularly happy in dealing with such conditions as gastritis, muco-membranous colitis and the chronic abdomen, conditions which are far too readily diagnosed on insufficient data. The writer's style and humour make the reading of these lectures a pleasure, and at the same time they are full of the most practical advice both in diagnosis and treatment.

Minor Surgery. By LIONEL R. FIFIELD, F.R.C.S. Eng. Pp. ix., 431. London: H. K. Lewis & Co. Ltd. 1925.—The title of this book might lead one to expect merely an addition to and repetition of a number of similar books now obtainable, and as such somewhat superfluous. This is not the case. "Modern Minor Surgery" would be a more correct title, for the author has discarded all out-of-date and useless material, commonly handed down from generation to generation in successive editions of many books of this kind. This small volume contains brief accounts of the subjects usually described in books of the type, together with as much recent work as could be included conveniently. The whole is written in pleasing and readable style. In the chapter on antiseptics one is surprised to note the absence of any reference to mercurochrome, which surely is worthy of mention. However, this is a detail. The author's description of coma is excellent from the practical

point of view. The chapter on the anatomy and surgery of the fingers and palm of the hand deserves special mention, in that it clearly and concisely describes the recent work on this important subject. Throughout the book the line drawings are excellent and most helpful, making clear many points which otherwise would be somewhat difficult to understand. A few of the descriptions err on the side of brevity, and the expression *et cetera* is used on occasions which leave too much to the imagination of the junior student. It is a refreshing book, and should prove of immense value to those for whom it is written; the author states "students and practitioners," one might add junior house surgeons. It is a book to keep on the table and not on the shelf. We look forward with pleasant anticipation to Mr. Fifield's further publications.

Manual of Surgery. By ALBERT CARLESS, C.B.E., M.B., M.S. Lond., F.R.C.S., assisted by CECIL P. G. WAKELEY, F.R.C.S. Eleventh Edition. Pp. xii., 1,570. London: Baillière, Tindall & Cox. 1924. Price 30s.—A work which first appeared in 1898 and has now reached its eleventh edition, whilst it has been circulated largely in America and translated into Hungarian, Chinese and Arabic, is too well known to require any detailed review. Mr. Wakeley is responsible for the difficult task of bringing it up to date, and we can congratulate him on his success. Possibly the chief fault of the book is that it has become rather too large, whilst modern additions are not always harmoniously grafted on to the old work. The X-Ray supplement is very valuable, but we think it a pity that these pictures should be placed separately at the end of the book.

Some Encouragements in Cancer Surgery. By G. GREY TURNER, F.R.C.S. Pp. 75. Plates 40. Bristol: John Wright & Sons Ltd. 1925. Price 7s. 6d. net.—This little monograph fully justifies its title; perusal of its pages will show to all concerned that, depressing as is the position in regard to cancer, as revealed by the Registrar-General's figures, the outlook for the cancer sufferer is far from hopeless. The author takes seriatim the organs subject to cancer and open to surgical attack, and he relates in detail many cases where the result was encouraging beyond the average. It may be noted that he uses the word in a wide sense, and includes sarcomata of bone. In the section devoted to the latter it is indeed encouraging to read of a case of periosteal sarcoma of the femur alive and well twelve years after amputation through the thigh. The diagnosis, let it be noted, was confirmed by competent microscopic authority. It is interesting to note

that the author appears to look upon the modern perineal excision, after colotomy, as the operation of choice for carcinoma of the rectum. He finds, presumably, like so many other surgeons, that the results are comparable with those of the abdomino-perineal operation, and the operative mortality considerably lower. The author very properly pleads for earlier recognition of the distressing cases of mouth cancer seen only too often in hospital. We notice that he advocates the routine use of the block-dissection of Crile, usually on both sides of the neck. The clinical details supplied of numerous cases are supplemented by illustrations of notable excellence, and every case labelled as cancerous was confirmed by microscopic examination. The monograph is most interesting and instructive and well repays perusal, showing as it does how well worth while it is to take pains to plan and carry out one's cancer operations in the light of modern knowledge of cancer pathology. If that be done consistently and conscientiously, steady improvement in our results cannot but be the result.

Cancer : Postgraduate Lectures, delivered under the auspices of the Fellowship of Medicine. Edited by HERBERT J. PATERSON, with a preface by Sir JOHN BLAND-SUTTON, LL.D., F.R.C.S. Pp. xvii., 186. London : John Bale, Sons and Danielsson Ltd. 1925.—The twelve lectures here printed, each by a leading authority in his special subject, deserve to be read by all practitioners, for they are representative of the most modern teaching. Sir Thomas Horder contributes a lecture on "Some Medical Aspects of Cancer," Dr. Archibald Leitch one on "The General Pathology of Cancer," and the others are respectively on Cancer as it affects the larynx, œsophagus, breast, stomach, uterus, intestines, kidney, bladder and rectum. The lectures are mainly clinical, and the reader is spared any discussion of operative details, an omission which the general practitioner will appreciate. Sir John Bland-Sutton's introduction abounds in suggestive ideas. Numerous excellent illustrations adorn the text.

The Theory and Practice of the Steinach Operation. By Dr. PETER SCHMIDT (Berlin), and an Introduction to the English edition by J. JOHNSTON ABRAHAM, C.B.E., M.D. Dub. Pp. xiv., 150. London : William Heinemann (Medical Books) Ltd. 1924. Price 7s. 6d.—This book of Dr. Peter Schmidt has been translated from the German by Dr. M. D. Eder. It contains a summary of the evidence, based on a practical experience of one hundred cases, in favour of this procedure, which has been carried out for various conditions. A brief *resumé* of Steinach's work on the sex-hormones is included,

which enables one to appreciate the stages by which the conclusions arrived at were reached. Experimenting on the sex glands of rats, he applied his conclusions to the sexual functions of man, arousing considerable interest and antagonism, but having many practical results with which to maintain his claims. The remarkable evidence of regeneration obtained in old rats by ligature of the vas is, apparently, paralleled in the results obtained in man by a similar procedure. The author gives interesting details of its effect in eighty-four out of some hundred cases, and if the claims are justified, the operation is established as a valuable aid in combating premature senility and the decay of old age.

A Synopsis of Special Subjects : " Diseases of the Skin," by H. C. Semon, M.D. ; " Obstetrics and Diseases of Women," by M. Donaldson, M.D., B.Ch. Cantab., F.R.C.S. ; " Diseases of the Ear, Nose and Throat," by Archer Ryland, F.R.C.S. Ed. ; " Diseases of the Eye," by J. F. Cunningham, O.B.E., F.R.C.S. Pp. viii., 376. Demy 8vo. London : H. K. Lewis & Co. Ltd. 1924. Price 18s. net.—This volume is composed of four entirely separate parts. Each part is, as its name suggests, a synopsis of the subject of which it treats. Although the subject-matter is much condensed, the book is still grammatical and readable. In the Preface the authors are not ambitious, but state that their object is solely practical for the use of the busy practitioner, but we would suggest that a little less concentration of that part of each disease that mainly interests a practitioner—the treatment—would have rendered the volume of more practical use to a practical man. At the end of each part is an efficient index, but as each index is wedged in between the various sections of the book, it becomes a little difficult to find the index for the special subject on which one may be wanting information. It would be better if either all four indices were at the end of the book or all were combined in a single index. The book is well printed, and is of convenient size.

Clinical Researches in Acute Abdominal Disease. By ZACHARY COPE, B.A., M.D., M.S. Lond., F.R.C.S. Eng. Pp. xiii., 148. London : Oxford Medical Publications. 1925. Price 12s. 6d.—This volume consists of a series of more or less disconnected chapters dealing with the diagnosis of acute abdominal conditions by means of referred pain. There are full descriptions with diagrams of the areas of referred pain and hyperæsthesia of the principal acute abdominal conditions, and there are many illustrative cases given in full to support each point. Whilst the points the author brings out are most interesting, it seems improbable that they will ever become

of any great practical value in diagnosis, owing to the well-recognised variability of referred pain and hyperæsthesia. It is probably the experience of most surgeons that the greater amount of hyperæsthesia there is the less organic trouble will be found when the abdomen is opened. The book is well printed in large and easily-readable type, and profusely illustrated with clear diagrams. We would recommend this book to those who are interested in this subject, but fear its practical value is but slight.

An Outline of Endocrinology. By W. M. CROFTON, B.A., M.D. Pp. vii., 126. Edinburgh: E. & S. Livingstone. 1924. Price 6s.—This book is founded on lectures delivered by Dr. Crofton at the University College, Dublin, and constitutes a review of the generally-accepted facts connected with this difficult subject, with the valuable addition of the author's views on some of the bio-chemical theories involved. For the sake of clearness the glands are taken seriatim, and each is treated from the following points of view: Histological, Developmental, Physiological, and Therapeutical, but their inter-relationship is in nowise lost sight of; it is shown, for instance, that glycosuria may be attributable, not only to abnormal functioning of the pancreas, but to some irregularity of the thyroid, adrenals, or pituitary. We are told that it is a mistake to regard insulin as the only potent therapeutic substance in the treatment of diabetes, and that there are several products which will enable the diabetic patient to keep himself feeling well. The author has evidently devoted considerable thought to the subject of glucose metabolism, and the chapter dealing with the pancreas contains much interesting argument based on the theory of "adapters" and on the "alternation of generations." The book is easy to read, and should help to disperse the cloud of clap-trap which has recently so befogged the atmosphere surrounding organotherapy.

Parasitology for Medical Students. By ALEX. MILLS KENNEDY, M.D. (Glas.). Pp. x., 142. Edinburgh: Oxford University Press. 1925. Price 10s. 6d. net.—This book will find favour with the senior medical student. It is divided into six chapters dealing respectively with the Insects and Arachnoids Tape Worms, Flukes, Round Worms, Protozoa, Spirochætes and Fungi. The author describes the life histories of the more important members of those animal groups which are inimical to man. He furthermore discusses the diagnosis, prophylaxis and treatment of the diseases caused by them. Although some of the illustrations are not quite up to standard, the author makes up for this by his extremely clear and lucid descriptions

in the text. The book contains full and up-to-date information on the subject, and we can confidently recommend it to the student and practitioner, for whom it is intended.

The Primary Problems of Medical Psychology. By Dr. CH. DE MONTET. Translated by A. NEWBOLD. Pp. vii., 142. London: John Bale, Sons & Daniellsson Ltd. 1923. Price 7s. 6d. net.—The title of this short work is rather misleading. Described by the author as a text-book for students and practitioners, the reader might be pardoned for expecting the subject-matter to deal with simple or elementary medical psychology. Actually the book opens with a philosophic discussion of the author's concept of consciousness. Further on perception, error, and falsehood are treated in a highly technical style. The second half of the book deals philosophically with the relations of body and soul. The whole work savours more of metaphysics than of medical psychology, and is likely to appeal only to a very limited number of readers, and those certainly not practitioners of medicine. Possibly some of the difficulties which make the book rather tedious reading arise from the fact that the book is a translation; quite a number of words are used in a sense other than the usually accepted one among English writers on psychology.

Sidelights from the New Psychology. By EVELYN SAYWELL. L.R.C.P., L.R.C.S. (Edin.). Pp. viii., 99. London: The Scientific Press Ltd. 1924. Price 3s. net.—This small book is clearly written, and seems likely to serve its purpose admirably. It is not overburdened with technical language. Interest is well sustained, and it should appeal to the class of reader for whom it is particularly intended. The free use of diagrams probably helps the amateur reader, but is not entirely free from objection. It is practically impossible adequately to represent psychological concepts diagrammatically. The chapters dealing with problems of the nursery should be very helpful to nurses, doctors and parents. There certainly appears to be a place for this little book, in spite of the already large numbers of books dealing with the so-called New Psychology.

Essentials of Infant Feeding. By E. A. BARTON, Medical Officer to the Child-Welfare Department, University College Hospital, London. Pp. viii., 80. 1925. London: H. K. Lewis. Price 3s. 6d.—It is an undeniable fact that the student of medicine now has so many subjects to grapple with that very little time can be devoted to a most important branch of clinical medicine—the feeding of infants. Mr. Barton is a pediatrist of wide experience, and he is to be congratulated on

the production of a small-sized text-book which contains much valuable information on the subject in question. A section is devoted to breast feeding, and the author makes it quite clear that this is the most desirable of all known methods for the nutrition of infants during the earlier stages of their lives. We are very glad to notice that he is in agreement with the more enlightened authorities in advocating that weaning should be delayed for at least nine months whenever this is possible. We must criticise one paragraph which reads, "Want of success in breast feeding is dependent on the failure of either the mother or the infant." In our experience lack of success is not infrequently due to those in attendance on the mother who fail to encourage her in her efforts, and to the ill-advised recommendation of a multiplicity of proprietary foods whose chief advantage in many cases is to the manufacturer. The section on vitamines in milk is extremely important and well written, and should serve to emphasize the superiority of fresh cow's milk over all other kinds of artificial food in the great majority of cases where breast feeding seems impossible. A little space is given to calory feeding, but we heartily agree with the statement that although calory calculations are elegant exercises, at the best they can give but a rough idea of the requirements of an infant.

An Explanation of Hydrogen Ion Concentration, including the Capillator method for determination of Acidity and Alkalinity. By HENRY A. ELLIS, B.A., M.B., Ch.B. Pp. 18. London: H. K. Lewis & Co. 1925. 1s. net.—This little brochure deals in a simple way with a most important problem in modern clinical medicine, namely the determination of the "true" acidity or alkalinity of fluids derived from or present in the body tissues. The author discusses the modern theories of solution, especially with regard to acids and alkalis, and deals in a concise manner with Sorensen's exponential formula, better known as pH. The importance of clearly understanding the significance of hydrogen ion concentration in normal and pathological body fluids cannot be over-estimated. Mr. Ellis also describes a convenient method for the determination of the pH of fluids, using an apparatus known as the capillator, which enables the clinician to carry out his experiments at the bedside by means of colour indicators and capillary tubes. We consider that this little book will be of great service to those physicians who are interested in the variations in human metabolism, and who realise the necessity for devoting serious attention to the investigation of these variations.

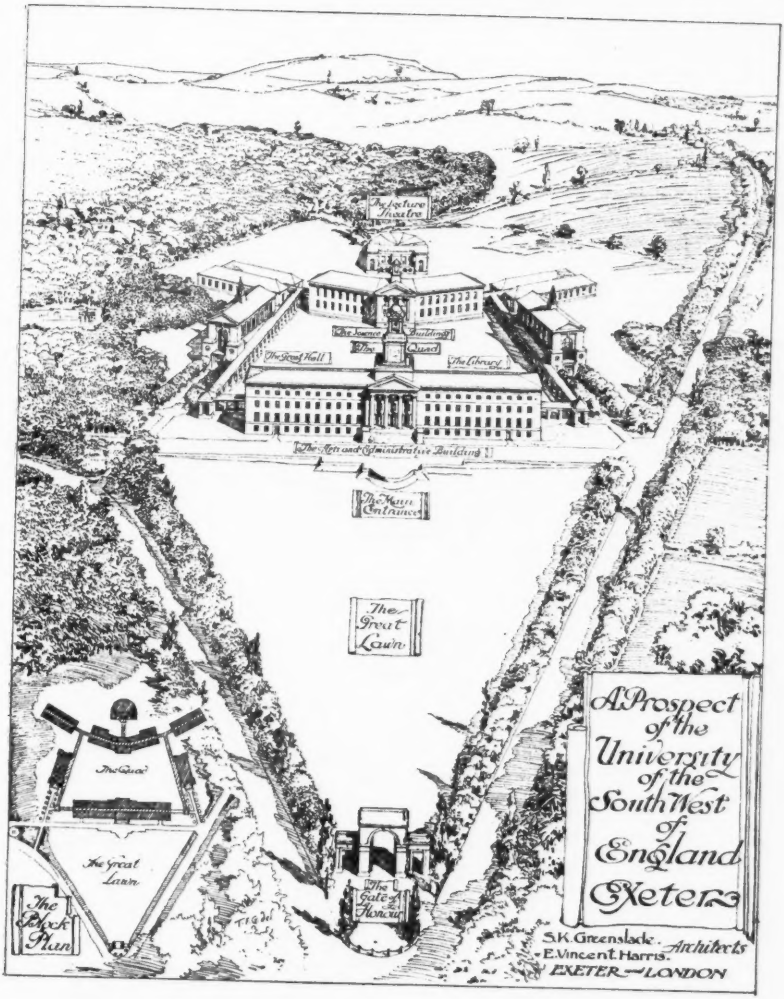
Editorial Notes.

The University College of the South-West.

THIS College has been in existence for some sixty years, and though founded originally for the service only of the immediate neighbourhood, its activities soon extended to areas much more remote. It continued to grow and develop functions undreamed of by its original founders till, some three years ago, it was recognised by the University Grants Commission as a fully-constituted University College. It now numbers some three hundred and fifty students, and the accommodation of the buildings erected at the beginning of this century is now inadequate to its needs. At the same time the ambitions of the College authorities have likewise expanded, and it is hoped that the new buildings which are to be erected on the Streatham Hall Estate, a recent generous gift to the College, will some day be the home of a federal University of the South-West, with Schools of Medicine, Engineering and Applied Science at Plymouth, Agriculture at Newton Abbot, Mining at Camborne, and Arts and Pure Science at Exeter.

We reproduce the architect's elevation of the proposed new buildings at Exeter: the site is a magnificent one, and the architects have made the most of it. The University College of the South-West is making a modest appeal for £100,000 for new buildings and endowments.

The development of advanced education in arts and science, academic or technical, on the broad lines of the modern University College merits the sympathy and support of the community, and the eventual amalgamation of such


Lecture Theatre
The Great Hall
The Library
The Arts and Administrative Building
The Main Entrance
The Great Lawn
The Great Lawn
The Block Plan
The Gate of Honour
A Prospect of the University of the South West of England Exeter
S.K. Greenslade
E. Vincent Harris
Architects
EXETER — LONDON

centres as constituent colleges of a university is the natural and desirable consummation of these movements.

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The Royal Visit.

On June 9th His Majesty the King, accompanied by Her Majesty the Queen, opened the new buildings of the University so generously given by Sir George Wills, Bart., and the late Mr. Harry Wills. Their Majesties were accorded an enthusiastic and loyal welcome by the citizens of Bristol, and entertained by Sir George Wills, Bart., the Pro-Chancellor and Chairman of the Council of the University, at the University Students' Union Hall. After proceeding to the Council Chamber of the University, where several presentations were made, the King and Queen entered the Great Hall. The Chancellor, Lord Haldane, read a loyal address, and His Majesty having expressed the pleasure afforded the Queen and himself by their inspection of the magnificent building, declared it open. His Majesty graciously referred to his profound and sorrowful regret that Mr. Harry Wills had not lived to see the completion of the work undertaken by himself and his brother. To Dame Monica Wills, his widow, we offer our warmest congratulations. Bristolians know full well that this great honour was bestowed for the work she herself accomplished, particularly in conjunction with the erection and organisation and equipment of St. Monica's Home for Incurables, which her late husband had founded and endowed.

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The British Medical Association's Annual Meeting at Bath.

This meeting was a conspicuous success, whether judged by the scientific medical work accomplished or by the hardly less important social aspects of the meeting. Without the hearty co-operation of the Mayor and Corporation, the private hospitality and generous support of

Bath inhabitants and, we may add, of the hotel management, the unstinted efforts of our medical colleagues could never have achieved the distinction attaching to this Bath meeting. Dr. Fred G. Thomson, the President, and Mr. W. G. Mumford, the Honorary General Secretary, on whose shoulders fell the heaviest share in organising the meeting, have every reason to take a legitimate pride in the magnificent results attained.

It was, however, a very great disappointment to everyone that the President's health had not sufficiently recovered from a recent illness to allow of his personal attendance; nevertheless, we had the advantage of hearing his very interesting Presidential Address read by his son, while Mrs. Thomson was a most gracious hostess despite her anxiety.

The most regrettable death of Mr. Forbes Fraser, who would have succeeded to the Presidency of this meeting, and which in fact was due to his initiation, had already cast a shadow over the city, and one cannot doubt that the consequent strain on Dr. Thomson was indirectly the determining cause of his ill-health, in which we all sympathised.

The private and generous hospitality of the Marquis and Marchioness of Bath, the Earl and Countess Temple, the Abbot of Downside, and the President and members of the Bath Division, and of many others were attractive features of this meeting.

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The University of Bristol.

THE University did honour to the occasion when on the recommendation of Senate honorary degrees were conferred on two of the most distinguished members of the British Medical Association, viz. Sir Humphry Rolleston, Bart., K.C.B., President of the Royal College of Physicians, and Sir Berkeley Moynihan, Bart., K.C.M.G., C.B. Prior to the conferment members of the

medical staff entertained at luncheon given in the old Council Chamber of the University the graduates and a large number of medical confrères and their wives from among the members visiting the Bath meeting. After the degree ceremony in the Large Hall the Bristol Branch of the Association received the visitors at tea in the Royal Fort Gardens of the University.

On other days large parties also were taken over the Bristol Savages' home at the Red Lodge, and to Messrs. W. D. and H. O. Wills' and Messrs. J. S. Fry's Factories.

Obituary.

WALTER CARLESS SWAYNE, M.D., B.S. Lond., M.D., Ch.B. Bristol.

THE tragedy of Professor W. C. Swayne's untimely end lies not only in the particularly painful circumstances which resulted in his death, but in the great loss to the profession which he adorned by his unselfish devotion to the great work of founding an obstetric and gynæcological clinic worthy of a University school of medicine, and which his persistent and tactful determination of purpose most meritoriously attained and bequeathed to us.

Having just completed his work of examining at the University, he joined his son-in-law, Mr. R. D. Wreford Brown, and Mrs. Wreford Brown, his daughter, and his son, who was already with them, at their residence at Sellacks, near Hereford. Mr. Wreford Brown had been badly gassed at Cambrai, and further, as a legacy of his war service, suffered from a chronic recurring purulent otitis, and his mental condition was causing anxiety. The family party had seemed happy enough and all retired to bed, but about one o'clock in the morning Mr. Wreford Brown apparently became acutely deranged, fired revolver shots out of his bedroom window, "to attract attention," he said; then, going across the passage, he aroused Dr. Walter

Walter C. Swayne

Swayne, declaring the house was gassed, and in the darkness shot his father-in-law in the abdomen and in the hips. Young Swayne ran in and bravely secured his brother-in-law.

It was so characteristic of Walter Swayne that his first thought as he lay mortally wounded was to inquire if anyone else was hit. This somewhat isolated and remote district presented such difficulty in obtaining adequate assistance that Dr. Walter Swayne had expired several hours before his surgical colleague, who had hurried from Bristol as soon as the message got through, had arrived. Those of us who knew Mr. Wreford Brown's gentle and kindly disposition can join with his wife and their relations in attributing this terrible disaster to delusions apparently determined by conditions resulting from his war service.

W. C. Swayne, the eldest son of the late Mr. R. D. Swayne, of Tillington Court, Hereford, who had fourteen children, was born at Mathon, near Malvern, in 1862. He was educated at King Edward's School, Birmingham, and later came to live with his uncle, the late Joseph Griffiths Swayne, to enter the Bristol University College and General Hospital. In 1886 he went up to Guy's Hospital for the completion of his clinical work. After taking the double qualification of the Colleges, and in 1888 after graduating M.B. at the University of London with honours in forensic medicine, he was appointed Resident Obstetric Physician to Dr. Galabin and Dr. P. Horrocks, and shortly afterwards commenced to practise in Clifton, where he soon made his mark as an obstetrician. In 1891 he was appointed Obstetric Physician to the Bristol Royal Infirmary, a comparatively new post which had been initiated in 1887 with six beds for in-patients and an out-patient department. Dr. Swayne experienced at the Royal Infirmary the usual opposition to the development of the Gynæcological Department on modern lines. It was only some years later that the rules were altered to permit the Obstetric Physician performing abdominal operations, and Swayne's operating theatre was organised by him on the strictest antiseptic lines. His theatre "drill" was always irreproachable, and his skill as a diagnostician and operator led to a great expansion of the clinic.

It is worthy of note that although Swayne found himself opposing and opposed by his colleagues in his long struggle for the right of a gynæcologist to perform major operations his friendships with them never suffered. He was always "Dicky" Swayne to his opponents in the midst of hot controversy. In the end he succeeded in establishing a model department of midwifery both intern and extern and of gynæcology.

Dr. Swayne contributed many articles to medical journals on Obstetrics and Gynæcology. Some of his more important dealt with eclampsia and its bio-chemical problems. He often expressed his regret that he had begun to grow old in his profession before bio-chemistry was developed into a science, so that he lacked the requisite training for research in a subject that interested him so greatly.

Swayne was elected Professor of Midwifery in University College, Bristol, in 1902, and was continued in this Chair when the University was incorporated in 1909. He was an admirable teacher and a most loyal graduate of the new University, for he took the *ad eundem* degrees of M.D., Ch.B. at the earliest opportunity in Bristol on the strength of the degrees he already held from London University. He was an enthusiast in fostering a corporate spirit amongst the new graduates of Bristol, and was an ardent champion of the rights of Convocation, the representative body of the graduates. In the earliest days of the University he was unsparing in his criticism of the supreme authorities for their singular action in electing as professors all who had occupied Chairs in University College with the one exception of the Professor who had been Secretary of the Committee for Promoting the Foundation of the University. Swayne was keenly interested in the medical education of women, and the first woman resident at the Royal Infirmary was appointed to his Obstetric Department.

He was President of the Medico-Chirurgical Society in the year 1912–13, and his address then, like many of his original contributions to medical literature, was sound and erudite.

One of the most striking features in Swayne's professional career and in his character was his total lack of anything like

jealousy for his younger colleagues and possible rivals in his own specialism, and it was with great pride that he used to watch the progress of his pupils Myles Phillips and King in Sheffield, Green-Armytage in India and Statham in Bristol.

It was largely due to his initiative that the M.Ch. is granted in Obstetrics, and nothing proves more strikingly his originality than the plan of making an operation by candidates for the mastership a part of the rational test of fitness for this the highest degree conferred in the speciality. Without being a prolific writer, he made many valuable contributions to the Bristol Medico-Chirurgical Society and other scientific bodies.

Outside of his profession Swayne's chief hobby lay in soldiering. He was a keen student of military history, and early in life joined the Gloucestershire Artillery Volunteers as a boy-trumpeter, and in after years was usually referred to as " Bombardier Dick." He eventually rose to the rank of Major in the Territorial Artillery and received the Volunteer Decoration after twenty years' service. At the commencement of the war he was transferred for a time to command the Bristol University O.T.C., and was instrumental in developing in connection with the O.T.C. an enthusiastic company of " volunteers " amongst men who were over military age. Subsequently he raised the third line of the South Midland R.F.A., and finally commanded a battery of New Zealand artillery on Salisbury Plain, which he had the satisfaction of conducting overseas to France, although, to his lasting regret, his age debarred him from remaining to serve with the battery at the front. In addition, Swayne was an ardent Freemason, and had been Master of St. Vincent Lodge in Bristol and a Grand Warden in the Province of Bristol. His chief sport in his later years was trout-fishing, and in his country wanderings with his rod he used to search out and study any remains of the Roman occupation of Britain that came in his way.

At the time of his death Dr. Swayne still occupied his Chair in the University and was in charge of the clinic for venereal diseases at the Bristol Royal Infirmary, a department which he had organised since the war with his customary thoroughness and administrative ability. He had retired from the active staff of the Infirmary as Obstetrician and Gynæcologist in

1924, and held the office of Honorary Consultant to that institution.

In his younger days he was a keen athlete, he played "Rugger" for Guy's and was in the Guy's Hospital rowing four. In later life he was recognised as an expert with the rod, well known on the Wylye and the Monnow.

Walter Carless Swayne was one of the most lovable and beloved of Bristol's citizens, ever ready to help anyone who turned to him in trouble, and countless of his poorer patients and friends feel to-day the greatness of their loss.

In 1894 he married Louisa Margaret, daughter of the late Rev. R. F. Heath, and his widow and three daughters and a son, as well as his mother, survive him. To them we extend the deepest sympathy in their grievous loss, which his colleagues and many friends likewise feel so profoundly.

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Elizabeth Walker Dunbar

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ELIZA WALKER DUNBAR, M.D. Zürich, L.R.C.P.I., L.M.

DR. ELIZA WALKER DUNBAR, who we regret to hear died on August 25th in her eightieth year, was the pioneer among women medical practitioners in this city. A daughter of the late Alexander Walker, M.D., of the Bombay Military Department, she was born in India in 1845, and was educated at the Ladies' College, Cheltenham, and at Frankfort-on-Main. Having acquired a good knowledge of German, Miss Walker (who subsequently assumed the family name of Dunbar), decided, at the age of twenty-three, to study medicine at Zürich, and after four years spent at this University she obtained the degree of M.D. in 1872, on presentation of her thesis, "Embolie der Hirn-Arterien."

After a year's postgraduate work in Vienna Dr. Dunbar returned to England, acted for a time as House Surgeon to the Bristol Royal Hospital for Sick Children and Women, and then started practice in Dowry Square, Clifton, although debarred from British registration. When, after the passage of the Russell Gurney Enabling Act in 1876, the King and Queen's College of Physicians, Ireland, threw open its examinations to women, Dr. Dunbar, together with four other women, presented herself for examination, and obtained the licence of this College. She was thus enabled to enrol her name on the Medical Register of the United Kingdom.

Meanwhile, assisted by Miss Read and other supporters of the independence of women, Dr. Dunbar founded, in 1874, the Read Dispensary for Women and Children, Hotwells, and later, in 1895, with the co-operation of these and other friends, the Bristol Private Hospital for Women and Children was opened in Berkeley Square, Clifton. To both these institutions,

founded with the double purpose of enabling women to practise medicine and surgery, and to facilitate the treatment of women by women, Dr. Dunbar gave many years of faithful and devoted service. She also acted for many years as Medical Officer to the Red Lodge Reformatory for Girls, and to the Bristol Training College for Elementary Teachers.

In 1906 she contributed to this *Journal* an article entitled, "The New Theory and Prophylactic Treatment of Puerperal Eclampsia."

Dr. Dunbar was essentially a fighter and a pioneer. She was intrepid in thought and action, and possessed, and retained to the end, high qualities of enterprise and courage. She was remarkably loyal and devoted to her old friends and patients, by whom also she was greatly beloved.

It is well to recall that the present advantage of freedom to work enjoyed by women are the direct fruit of the heroic struggles of those earlier determined spirits who, like Dr. Walker Dunbar, fought their way onward through obloquy and opposition. For many years Dr. Dunbar used to remove her brass plate at night lest morning should find it stolen or defaced!

Her death breaks another link with the past, but there remain the work done for the benefit of her successors and her fellow-citizens, and the influence for good exercised by a courageous spirit who fought well and aimed high.

The Library of the Bristol Medico-Chirurgical Society.

The following publications have been received since the publication of the List in May, 1925.

	October, 1925.
American Laryngological Association (1) ..	1 volume.
American Ophthalmological Society (2) ..	1 volume.
Mr. H. S. Bunny (3)	1 volume.
Mr. E. W. Hey Groves (4)	2 volumes.
Smithsonian Institution (5)	2 volumes.
University of Adelaide (6)	1 volume.

Unbound periodicals have been received from Dr. Carey Coombs, Mr. Hey Groves, and Dr. J. Odery Symes.

THE ONE HUNDRED AND THIRTEENTH LIST OF BOOKS.

The figures in round brackets refer to the figures after the names of the donors. The books to which no such figures are attached have either been bought from the Library Fund or received through the *Journal*.

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Annals of the Pickett-Thomson Research Laboratory, Vol. I., Part 2 1925
Ashby & Earp .. *The Coming of Baby* 1925
Beattie & Dickson *Beattie & Dickson's Pathology* .. 3rd Ed. 1925
Beck, C... .. .. *The Crippled Hand and Arm* 1925
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Fifield, L. R. .. *Minor Surgery* 1925
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Rea, R. Lindsay .. *The Treatment of Interstitial Keratitis* 1925
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Tidy, H. L. .. .. *Synopsis of Medicine* .. .. .. 4th Ed. 1925
Turner, G. Grey .. *Some Encouragements in Cancer Surgery* .. 1925
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TRANSACTIONS, REPORTS, JOURNALS, ETC.

Annual Report of the Smithsonian Institution, 1923 .. .. (5) 1925
Collected Papers of the Mayo Clinic, XVI., 1924 1925
Obstetrical Transactions, Vol. XXVII., 1885 .. .. (3) 1886
Sixième Congrès de la Société Internationale de Chirurgie, July, 1923, 2 vols .. .. (4) 1925
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Transactions of the American Laryngological Association, 46th Meeting, 1924 .. .. (1) 1924
Transactions of the American Ophthalmological Society, XXII., 1924 .. .. (2) 1924